



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**CH 5 CIR 2 (S/N 11551K76786019)**

Component  
**Refrigeration Compressor**

Fluid  
**EMKARATE RL 32-3MAF (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a trace of moisture present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>WC0793042</b>   | ---      | ---      |
| Sample Date   | Client Info |             | <b>03 Aug 2023</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>35886</b>       | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

## WEAR METALS

|          | method | limit/base     | current      | history1 | history2 |
|----------|--------|----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >8 | <b>0</b>     | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >2 | <b>0</b>     | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m    | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m    | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m >2 | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >3 | <b>1</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >2 | <b>0</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >8 | <b>&lt;1</b> | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >4 | <b>&lt;1</b> | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m    | <b>&lt;1</b> | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m    | <b>0</b>     | ---      | ---      |

## ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>521</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>79</b>    | ---      | ---      |

## CONTAMINANTS

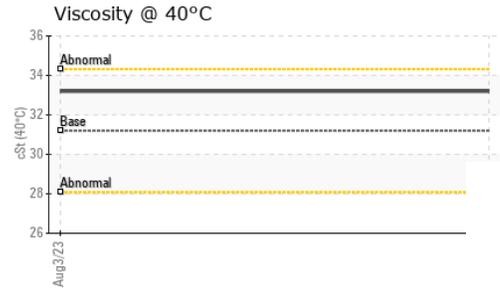
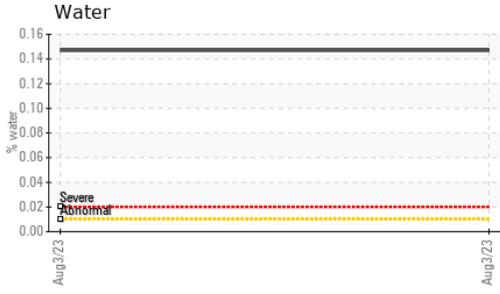
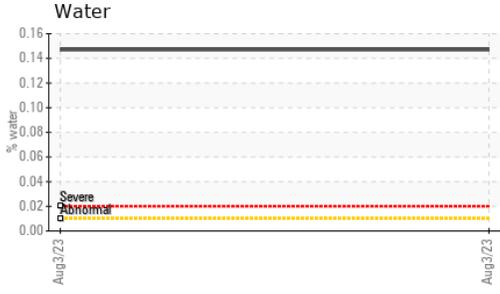
|           | method | limit/base       | current       | history1 | history2 |
|-----------|--------|------------------|---------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>2</b>      | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m      | <b>0</b>      | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>      | ---      | ---      |
| Water     | %      | ASTM D6304 >0.01 | <b>0.147</b>  | ---      | ---      |
| ppm Water | ppm    | ASTM D6304 >100  | <b>1477.7</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base     | current      | history1 | history2 |
|------------------|----------|----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.05 | <b>0.014</b> | ---      | ---      |



# OIL ANALYSIS REPORT



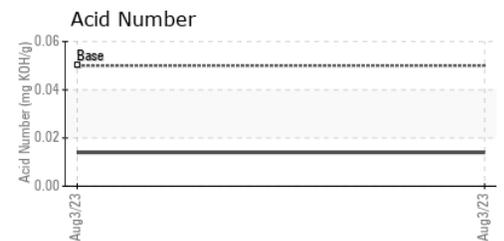
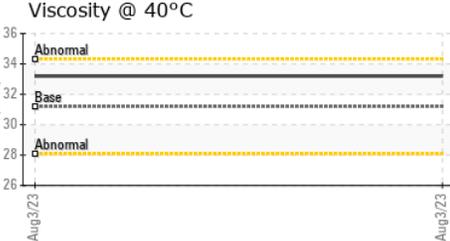
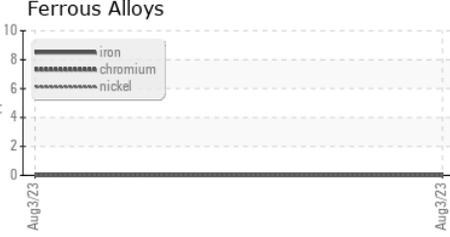
| VISUAL           | method | limit/base | current | history1 | history2 |     |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Debris           | scalar | *Visual    | NONE    | LIGHT    | ---      | --- |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Emulsified Water | scalar | *Visual    | >0.01   | NEG      | ---      | --- |
| Free Water       | scalar | *Visual    |         | NEG      | ---      | --- |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |     |
|------------------|--------|------------|---------|-------------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D445  | 31.2    | <b>33.2</b> | ---      | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

|        |  |  |  |          |          |
|--------|--|--|--|----------|----------|
| Color  |  |  |  | no image | no image |
| Bottom |  |  |  | no image | no image |

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0793042      **Received** : 11 Aug 2023  
**Lab Number** : 05922249      **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10602196      **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**RANA MEAL SOLUTIONS**  
 550 SPITZER RD  
 BARTLETT, IL  
 US 60103  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: